CD-ROM volume locks up due to backing store, changing the CD-ROM volume to load a preferred operating system becomes difficult. It would be desirable to use the CD boot image in a hard disk emulation format to load a preferred operating system without the boot media being locked up due to backing store restrictions.

5   The following is hereby incorporated by reference: 1) U.S. Patent Number 6,279,109 issued August 21, 2001, "Computing System And Operating Method For Booting And Running A Graphical User Interface (GUI) With R/W Hard Drive Partition Unavailable", Michael Brundridge. 2) "El Torito" Bootable CD-ROM Format Specification, Version 1.0, January 15, 1995, Curtis E. Stevens, Phoenix Technologies and Stan Merkin, 10   IBM Corporation.

SUMMARY OF THE INVENTION

15   It has been discovered that a method and system may be used for enabling removal of a removable medium of a boot device included in a computer system when booting a boot operating system. The method and system thereof for enabling removal of a removable medium of a boot device is described.

In one embodiment, a method for enabling removal of a removable medium of a boot device included in a computer system when booting a boot operating system includes 20   executing a boot device driver program to configure a RAM disk. The boot device driver program is included in the boot operating system. The method also includes copying the contents of the boot sector of the removable medium to the RAM disk and modifying the boot operating system by using the boot device driver program to redirect the boot media input/output to the RAM disk. The redirection of the boot media I/O to the RAM disk 25   enables the removal of the removable medium.

It would be desirable to use a non MS-DOS based boot operating system when the CD boot image is set to hard disk emulation. In one embodiment, the boot operating system is preferably a 32-bit operating system.

In one embodiment, a computer system to implement the method of enabling removal of a removable medium of a boot device of the computer system when booting a boot operating system is described. The computer system also includes a processor, a memory, and a boot device driver program executable by the boot operating system. The memory includes

5   a RAM disk memory allocated to emulate a hard disk. On executing the boot device driver program the contents of the boot sector of the removable medium are copied to the RAM disk. The boot device driver program modifies the boot operating system by using the boot device driver program to redirect the boot media input/output to the RAM disk. The redirection of the boot media I/O to the RAM disk enables the removal of the removable

10   medium.

In one embodiment, a computer-readable medium includes a computer program accessible therefrom. The computer program includes instructions for executing a boot device driver program, executable by a boot operating system. The boot operating system is loaded by the boot device during a boot of a computer system. The computer program also

15   includes instructions for copying contents of a boot sector of a removable medium of the boot device to a RAM disk using the boot device driver program. The boot operating system and the boot device driver program are stored as an embedded image on the boot sector of the removable medium. The memory of the computer system includes the RAM disk memory allocated to emulate a hard disk. The computer program further includes instructions for

20   modifying the boot operating system using the boot device driver program to redirect boot media I/O to the RAM disk. The memory based boot operating system enables the removal of the removable medium.

25   **BRIEF DESCRIPTION OF THE DRAWINGS**

The present invention may be better understood, and its numerous objects, features and advantages made apparent to those skilled in the art by referencing the accompanying drawings. The use of the same reference number throughout the several figures designates a like or similar element.

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FIG. 1 illustrates a computer system, which includes a method of enabling removal of a removable medium of a boot device when booting an embedded operating system;

FIG. 2A shows a flow chart for a method of enabling removal of a removable medium of a boot device included in the computer system when booting an embedded operating

5   system; and

FIG. 2B shows a flow chart of an initialization procedure to configure a RAM disk.

DETAILED DESCRIPTION

The following description of the invention is intended to be illustrative only and not

10   limiting.

Referring to FIG. 1, a computer system 100 is shown that is suitable for implementing a method of enabling removal of a removable medium of a boot device included in the computer system 100 when booting an embedded operating system. The computer system 100 includes a processor ("processor") 105, for example, an Intel Pentium™ class

15   microprocessor or an AMD Athlon™ class microprocessor, having a micro-processor 110 for handling integer operations and a coprocessor 115 for handling floating point operations. Processor 105 is coupled to cache 129 and memory controller 130 via processor bus 191. System controller I/O trap 192 couples processor bus 191 to local bus 120 and is generally characterized as part of a system controller such as a Pico Power Vesuvious or an Intel™

20   Mobile Triton chip set. System controller I/O trap 192 can be programmed in a well-known manner to intercept a particular target address or address range, and, upon intercepting a target address, system controller I/O trap 192 asserts an intercept signal indicating that processor 105 attempted to access the target address.

A main memory 125 of dynamic random access memory ("DRAM") modules is

25   coupled to local bus 120 by a memory controller 130. Main memory 125 includes a system management mode memory area which is employed to store converter code to implement conversion methodology embodiments as will be discussed in more detail subsequently.